



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

N,K

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,810	09/28/2001	Christopher N. Olsen	219.40419X00	2878
20457	7590	07/16/2003		
ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-9889			EXAMINER ARBES, CARL J	
			ART UNIT 3729	PAPER NUMBER 8
			DATE MAILED: 07/16/2003	

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/964,810	OLSEN, CHRISTOPHER N.
	Examiner C. J. Arbes	Art Unit 3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 14 May 2003.

2a) This action is FINAL.      2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-23 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-23 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ .
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.  	6) <input type="checkbox"/> Other: _____ .

Art Unit: 3729

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-23, assuming these claims are statutory, are further rejected under 35 U.S.C. 103(a) as being unpatentable over Japan Pat. No. 07-245575 by Takeshi; hereinafter '575..

The '575 teaches parallel transmission lines for plural signals wherein a first plurality of conductive paths are in a first plane and are arranged in a first orientation and a second plurality of conductive paths are in a second plane and are arranged in a second orientation so as to minimize or reduce crosstalk. The parallel wires of the first plane are connected to the parallel wires of the second plane by means of through-holes. If in fact the '575 fails to teach ...analyzing characteristics of signals... (which it is believed that the Japanese Reference does teach) then it is held to have been obvious for an artisan to perform this step which would allow the minimization of crosstalk between the parallel conductors or paths. Alternatively the "analyzing" step is held to be unclear, vague and indefinite and without significance. It is not a positive or manipulative recitation in the same sense that "rearranging said pattern of conductive paths (Cf Claims 8 and 16) is.

Claims 1-23, assuming these Claims are statutory, are further rejected under 35 U.S.C. 103(a) as being unpatentable over Japan Pat No. 2000-244133, by Masano et al, hereinafter '133..

The '133 teaches a multiplayer wiring board having pluralities of conductive paths. A second group of parallel conductive paths is placed normal (90 degrees) to a first group of parallel conductive paths, a third group of parallel conductive paths is placed 30-60 degrees to the first group of conductive paths and a fourth group of parallel conductive paths is placed normal to the third group. The parallel groups are connected by means of through conductors. If in fact the '133 fails to teach...analyzing characteristics of signals...(which it is believed that the Japanese Reference does teach) then it is held to have been obvious for an artisan to perform this step which would allow the minimization of crosstalk between the parallel conductors or paths.

Applicant's Amendment and Remarks re patentability of Claims 1-23 have been duly noted. Applicant apparently have taken a position wherein it is believed that the JP '575 does not teach or suggest .... analyzing characteristics of signals passing along a plurality of conductive paths' orientation ... (Cf. Applicant's remarks at top of Page 6 of the Amendment) . It is difficult to conceive that the '575 would not analyze characteristics along a plurality of conductive paths.... . the thrust of the '575 is to reduce crosstalk between signals by constructing plurality of paths in two different orientations. In order to be able to do this one of ordinary skill in the art must establish a base or reference mark for the amount of crosstalk originally was occurring and comparing that with the crosstalk due to the orientation which Applicant recites to provide much less crosstalk. As applied to Claim 2 it is held to within the ordinary skill of an artisan to provide timing relationships between timing relationships of signals between conductive planes. If Applicant believes or insists otherwise, Applicant is

Art Unit: 3729

requested to establish what he believes one of ordinary skill in this art possesses in terms of relevant formal education, experience and/or other training so that it can be established whether indeed one of ordinary skill in the art can establish timing relationships of signals across a first plurality of conductive paths given the '575 teaching. Just as Applicant's object is to reduce multiline effects on a PCB, so is that of the '575. Moreover the '575 also makes the claimed invention obvious. With respect to Claim 7, the '575 also teaches providing throughholes which connect at least wiring pattern #3 in block #2 (Shown by means of broken lines).

Applicant again emphasizes that JP '133 fails to expressly teach or even suggest that a limitation ... of analyzing characteristics of signals passing along a plurality conductive paths arranged in a first orientation... is met. Applicant does not attribute enough to the fictitious one of ordinary skill in this art. One would invariably analyze characteristics of signals passing along conductive paths to establish a base line or base before designing other orientations to understand indeed learn if the construction is improving the PCB i.e. that crosstalk is less. The '133's objects are very parallel and similar to those of Applicant. Moreover the '133 teaching at a minimum suggests Applicant's claimed invention. There is no reasonable doubt. There is no need to provide any additional references to combine with either the '575 or the '133 or to provide motivation to combine any secondary references these two excellent teachings. Moreover inasmuch as Applicant failed to provide specific remarks or arguments with respect to claims 3—7, 9-15, and 17-23, Applicant admits that these claims rise or fall

upon the patentability of the independent claims on which they depend. That is Applicant waives independent patentability with respect to these dependent claims.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to C. J. Arbes at telephone number (703)308-1857.

*CJA*  
CARL J. ARBES  
PRIMARY EXAMINER